

CLAIMS

1. A cabin structure for a working machine, comprising:

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- a cabin element which is equipped with a bottom part and which is substantially stationary in relation to the working machine,
- working means placed inside the cabin element, comprising a seat for the operator of the working machine as well as display and control means for controlling the operations of the working machine,
- a movable working base, on which the working means are placed, and
- a control mechanism for levelling the working position of the operator, comprising first and second means for tilting the working base in the longitudinal direction and the transverse direction of the working machine, and third means for rotating the working base around a vertical axis of rotation,

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wherein

- the movements of the first and second means are arranged to take place around a joint movement centre in such a way that the movement centre is placed on said vertical axis of rotation and also above the working base, and
- the working base is placed above the bottom part, and the control mechanism, in turn, is placed between the working base and the bottom part in such a way that the first and second means are placed underneath the third means.

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2. A cabin structure according to claim 1, wherein the working base is circular and is arranged touchingly at the inner surface of the bottom part, whose shape is a spherical surface at least on that range of height dimension in which the outer edge of the working base moves during respective movements of the working base and the frame of the

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working machine, wherein the centre of the spherical shape is placed in said movement centre.

5 3. A cabin structure according to claim 2, wherein the diameter of the working base is selected so that the working base is placed substantially at the upper edge of the spherical shape formed by the inner surface, touching the spherical shape at the whole length of its circumference.

10 4. A cabin structure according to claim 2, wherein the outer edge of the working base is provided with a downwards extending annular collar part which has at least an outer surface which is spherical and which is placed on the bottom part.

15 5. A cabin structure according to claim 1, wherein the movement centre is placed above the seat part of the seat, preferably substantially at the level of the hip of the operator.

20 6. A cabin structure according to claim 1, wherein the lower one of the first and second means is connected to the bottom part, and the third means are connected to the working base.

25 7. A cabin structure according to claim 1, wherein the working base comprises an elevated part underneath the seat part of the seat, wherein at least the third means are placed in the space formed in connection with the elevated part.

30 8. A cabin structure according to claim 1, wherein a cover arrangement, separate from the control mechanism, is placed at the point of linkage between the bottom part and the working base to connect the working base to the cabin element during their respective movements, and that the first part of the cover arrangement is placed at the edge of the working base, to extend downwards, and the second part consists of the inner edge of the bottom part.

9. A cabin structure according to claim 8, wherein the first part of the cover arrangement consists of the collar part of the working base, which has at least an outer surface with a spherical shape and which is placed on the bottom part.

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10. A cabin structure according to claim 1, wherein the bottom part is a sheet-like form piece which is connected at its upper edge to a substantially horizontal collar part formed at the lower edge of the cabin element.

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11. A cabin structure according to claim 1, wherein the bottom part is designed to have a downwards reducing horizontal cross-section, for example in such a way that the whole bottom part is, at least on the side of the inner surface, substantially spherical.

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12. A cabin structure according to claim 1, wherein the outer surface of the bottom part of the cabin element comprises connecting means for connecting the cabin structure to the frame of the working machine.

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13. A cabin structure for a working machine, comprising:

- a cabin element which is equipped with a bottom part and which is substantially stationary in relation to the working machine,
- 25 – working means placed inside the cabin element, comprising a seat for the operator of the working machine as well as display and control means for controlling the operations of the working machine,
- a movable working base, on which the working means are placed, and
- 30 – a control mechanism for levelling the working position of the operator, comprising first and second means for tilting the working base in the longitudinal direction and the transverse direction of the working machine, and third means for
- 35 rotating the working base around a vertical axis of rotation,

wherein

- 5 — the movements of the first and second means are arranged to take place around a joint movement centre in such a way that the movement centre is placed on said vertical axis of rotation and also above the working base,
- the working base is placed above the bottom part, and the control mechanism, in turn, is placed between the working base and the bottom part, and
- 10 — the working base is circular and is arranged touchingly at the inner surface of the bottom part, whose shape is a spherical surface at least on that range of height dimension in which the outer edge of the working base moves during levelling movements of the working base, wherein the
- 15 centre of the spherical shape is placed in said movement centre.

20 14. A cabin structure according to claim 13, wherein the diameter of the working base is selected so that the working base is placed substantially at the upper edge of the spherical shape formed by the inner surface, touching the spherical shape at the whole length of its circumference.

25 15. A cabin structure according to claim 13, wherein the outer edge of the working base is provided with a downwards extending annular collar part which has at least an outer surface which is spherical and which is placed on top of the bottom part.

30 16. A cabin structure according to claim 14, wherein the outer edge of the working base is provided with a downwards extending annular collar part which has at least an outer surface which is spherical and which is placed on top of the bottom part.

35 17. A cabin structure according to claim 5, wherein the lower one of the first and second means is connected to the bottom part, and the third means are connected to the working base.

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